

unpatentable over Bellenger in view of US Patent 5,959,677 to Date et al ("Date"). The Examiner objected to claims 2-5, 7-11, 13-17, 19-23, 25-29, 31-35, 37-41, 44-48, and 51-55 as being dependent upon a rejected base claim but otherwise allowable. Applicants thank the Examiner for the indication of allowability of claims 2-5, 7-11, 13-17, 19-23, 25-29, 31-35, 37-41, 44-48, and 51-55.

Section 102 Rejections

The Examiner has rejected claim 1 under 35 USC § 102(e) as being anticipated by Bellenger. Applicant has cancelled claim 1. Reconsideration is respectfully requested.

Section 103 Rejections:

The Examiner has rejected claims 6, 12, 18, 24, 42, and 49 under 35 USC § 103(a) as being unpatentable over Bellenger in view of Date.

Claim 6:

Claim 6, recites:

A method of packetizing a digital voice signal for transmission over a digital voice network where the voice signal may include a modulated data signal, the method comprising the steps of:

- a) determining whether an answer tone is present in the voice signal;
- b) when an answer tone is present, performing the steps of:
 - i) locating a first phase reversal in the voice signal;
 - ii) locating a second phase reversal in the voice signal, the second phase signal being the next consecutive phase reversal in the voice signal after the first phase reversal;
 - iii) determining the time interval between the location of the first phase reversal in the signal and the second phase reversal in the voice signal; and
 - iv) when the determined time interval is between a predetermined range of time values performing the steps of:
 - a) demodulating the voice signal to generate a digital data signal;
 - b) packetizing the digital data signal into a plurality of digital packets for transmission over the digital voice network.(emphasis added)

The Bellenger reference is directed to apparatus and methods for reducing the number of lines or modems required to provide modem access with multiple users by reducing the data rate when modem inactivity is detected. The Date reference is directed to systems and methods for combining video/audio signals with digital data signals, in particular television signals and captioning data. The claimed invention, as recited by claim 6 is directed to a method of packetizing digital voice data where the digital voice data may include a modulated data signal. The method first determines whether voice data includes a modulated data signal (a), b) i), b) ii), and b) iii)) and then demodulates the modulated data signal (b) iv) a)) prior to packetizing the signal. Neither the Bellenger nor the Date reference teach or suggest determining whether a digital voice signal includes a modulated data signal. In addition, neither the Bellenger nor the Date reference teach or suggest demodulating a modulated data signal prior to its transmission as digital packets. Further, neither the Bellenger nor the Date reference teach or suggest determining whether a digital voice signal includes a modulated data signal and then demodulating the

modulated data signal prior to its transmission as digital packets when the voice signal is determined to include a modulated data signal. Given the Bellenger and Date references lack of teachings it would not be obvious to combine these references to teach or suggest the invention recited by claim 6. Given the absence of any teaching, suggestion, or motivation in the Bellenger and Date reference to the recited method, Applicant respectfully contends that claim 6 is not obvious in view of the cited references.

Claim 12:

Claim 12, recites:

A method of packetizing a digital voice signal for transmission over a digital voice network where the voice signal may include a modulated data signal, the method comprising the steps of:

- a) determining whether an answer tone is present in the voice signal; and
- b) when an answer tone is present, performing the steps of:
 - i) locating a first phase reversal in the voice signal;
 - ii) locating a second phase reversal in the voice signal, the second phase signal being the next consecutive phase reversal in the voice signal after the first phase reversal;
 - iii) determining the time interval between the location of the first phase reversal in the signal and the second phase reversal in the voice signal; and
 - iv) when the determined time interval is between a predetermined range of time values performing the steps of:
 - a) encoding the voice signal into a digital data signal comprising the modulated data signal by linearly quantizing the voice signal; and
 - b) packetizing the coded voice signal into a plurality of digital packets for transmission over the digital voice network.
(emphasis added)

Similar to claim 6, claim 12 recites steps for determining whether digital voice data includes a modulated data signal (a), b) i), b) ii), and b) iii)) and then encoding the digital voice signal via linear quantization when a modulated data signal is detected (b) iv) a)) prior to packetizing the digital voice signal (b) iv) b)). Neither the Bellenger nor the Date reference teach or suggest

determining whether a digital voice signal includes a modulated data signal. In addition, neither the Bellenger nor the Date reference teach or suggest then encoding a digital voice signal via linear quantization prior to its transmission as digital packets when a modulated data signal is detected. Given the Bellenger and Date references lack of teachings it would not be obvious to combine these references to teach or suggest the invention recited by claim 12. Given the absence of any teaching, suggestion, or motivation in the Bellenger and Date reference to the recited method, Applicant respectfully contends that claim 12 is not obvious in view of the cited references.

Claim 18:

Claim 18, recites:

A method of transmitting a digital voice signal over a digital voice network where the voice signal may include a modulated data signal, the method comprising the steps of:

- a) determining whether an answer tone is present in the voice signal;
- b) when an answer tone is present, performing the steps of:
 - i) locating a first phase reversal in the voice signal;
 - ii) locating a second phase reversal in the voice signal, the second phase signal being the next consecutive phase reversal in the voice signal after the first phase reversal;
 - iii) determining the time interval between the location of the first phase reversal in the signal and the second phase reversal in the voice signal; and
 - iv) **when the determined time interval is between a predetermined range of time values performing the steps of:**
 - a) **demodulating the voice signal to generate a digital data signal;**
 - b) **packetizing the digital data signal into a plurality of digital packets for transmission over the digital voice network**
- c) transmitting the digital packets across the network;
- d) converting the digital packets into a received digital signal;
- e) determining whether the received signal includes a digital data signal;
- f) when the received digital signal includes a digital data signal modulating the received digital signal into a modulated data signal.

Similar to claim 6, claim 18 recites steps for determining whether digital voice data includes a modulated data signal (a), b) i), b) ii), and b) iii)) and then demodulating the digital voice signal to generate a digital data signal when a modulated data signal is detected (b) iv) a)) prior to

packetizing the digital voice signal (b) iv) b)). Neither the Bellenger nor the Date reference teach or suggest determining whether a digital voice signal includes a modulated data signal. In addition, neither the Bellenger nor the Date reference teach or suggest then demodulating a digital voice signal to generate a digital data signal prior to its transmission as digital packets when a modulated data signal is detected. The method further includes re-modulating the digital signal when a digital data signal is detected in a received signal. Given the Bellenger and Date references lack of teachings it would not be obvious to combine these references to teach or suggest the invention recited by claim 18. Given the absence of any teaching, suggestion, or motivation in the Bellenger and Date reference to the recited method, Applicant respectfully contends that claim 18 is not obvious in view of the cited references.

Claim 24:

Claim 24, recites:

A method of transmitting a digital voice signal over a digital voice network where the voice signal may include a modulated data signal, the method comprising the steps of:

- a) determining whether an answer tone is present in the voice signal;
- b) when an answer tone is present, performing the steps of:
 - i) locating a first phase reversal in the voice signal;
 - ii) locating a second phase reversal in the voice signal, the second phase signal being the next consecutive phase reversal in the voice signal after the first phase reversal;
 - iii) determining the time interval between the location of the first phase reversal in the signal and the second phase reversal in the voice signal; and
 - iv) **when the determined time interval is between a predetermined range of time values performing the steps of:**
 - a) **encoding the voice signal into a digital data signal comprising the modulated data signal by linearly quantizing the voice signal;**
 - b) packetizing the coded voice signal into a plurality of digital packets for transmission over the digital voice network
- c) transmitting the digital packets across the network;
- d) converting the digital packets into a received digital signal;
- e) **determining whether the received signal includes a coded voice signal; and**
- f) **when the received digital signal includes an encoded data signal decoding the received digital signal into a modulated voice signal by dequantizing the received digital signal.** (emphasis added)

Similar to claim 12, claim 24 recites steps for determining whether digital voice data includes a modulated data signal (a), b) i), b) ii), and b) iii)) and then encoding the digital voice signal via linear quantization when a modulated data signal is detected (b) iv) a)) prior to packetizing the digital voice signal (b) iv) b)). Neither the Bellenger nor the Date reference teach or suggest determining whether a digital voice signal includes a modulated data signal. In addition, neither the Bellenger nor the Date reference teach or suggest then encoding a digital voice signal via linear quantization prior to its transmission as digital packets when a modulated data signal is detected. Given the Bellenger and Date references lack of teachings it would not be obvious to combine these references to teach or suggest the invention recited by claim 24. In addition, neither reference teaches decoding the received digital signal in a modulated signal by dequantizing the received digital signal. Given the absence of any teaching, suggestion, or motivation in the Bellenger and Date reference to the recited method, Applicant respectfully contends that claim 24 is not obvious in view of the cited references.

Claims 30, 36:

Claim 30 is dependent on claim 12 and claim 36 is dependent on claim 24. Applicants respectfully contend that claims 30 and 36 are allowable over the references given the reasons stated above for claims 12 and 24, respectively.

Claim 42:

Claim 42, recites:

A method of packetizing a digital voice signal for transmission over a digital voice network where the voice signal may include a modulated data signal, the method comprising the steps of:

- a) determining whether the digital voice signal includes a modulated data signal; and
- b) when the digital voice signal includes a modulated data signal, performing the steps of:
 - i) encoding the voice signal into a digital data signal comprising the modulated data signal by linearly quantizing the voice signal; and
 - ii) packetizing the coded voice signal into a plurality of digital packets for transmission over the digital voice network. (emphasis added)

Similar to claim 12, claim 42 recites determining whether digital voice data includes a modulated data signal a) and then encoding the digital voice signal via linear quantization when a modulated data signal is detected b) i) prior to packetizing the digital voice signal (b) ii). Neither the Bellenger nor the Date reference teach or suggest determining whether a digital voice signal includes a modulated data signal. In addition, neither the Bellenger nor the Date reference teach or suggest then encoding a digital voice signal via linear quantization prior to its transmission as digital packets when a modulated data signal is detected. Given the Bellenger and Date references lack of teachings it would not be obvious to combine these references to teach or suggest the invention recited by claim 42. Given the absence of any teaching, suggestion, or motivation in the Bellenger and Date reference to the recited method, Applicant respectfully contends that claim 42 is not obvious in view of the cited references.

Claims 43:

Claim 43 is dependent on claim 42. Applicants respectfully contend that claim 43 is allowable over the references given the reasons stated above for claim 42, respectively.

Claim 49:

Claim 49, recites:

A method of transmitting a digital voice signal over a digital voice network where the voice signal may include a modulated data signal, the method comprising the steps of:

- a) determining whether the digital voice signal includes a modulated data signal;
- b) when the digital voice signal includes a modulated data signal, performing the steps of:
 - i) encoding the voice signal into a digital data signal comprising the modulated data signal by linearly quantizing the voice signal;
 - ii) packetizing the coded voice signal into a plurality of digital packets for transmission over the digital voice network
- c) transmitting the digital packets across the network;
- d) converting the digital packets into a received digital signal;
- e) determining whether the received signal includes a coded voice signal; and
- f) when the received digital signal includes an encoded data signal decoding the received digital signal into a modulated voice signal by dequantizing the received digital signal. (emphasis added)

Similar to claim 24, claim 49 recites determining whether digital voice data includes a modulated data signal a) and then encoding the digital voice signal via linear quantization when a modulated data signal is detected (b) i) prior to packetizing the digital voice signal (b) ii). Neither the Bellenger nor the Date reference teach or suggest determining whether a digital voice signal includes a modulated data signal. In addition, neither the Bellenger nor the Date reference teach or suggest then encoding a digital voice signal via linear quantization prior to its transmission as digital packets when a modulated data signal is detected. Given the Bellenger and Date references lack of teachings it would not be obvious to combine these references to teach or suggest the invention recited by claim 49. In addition, neither reference teaches decoding the received digital signal in a modulated signal by dequantizing the received digital signal. Given

the absence of any teaching, suggestion, or motivation in the Bellenger and Date reference to the recited method, Applicant respectfully contends that claim 49 is not obvious in view of the cited references.

Claims 50:

Claim 50 is dependent on claim 49. Applicants respectfully contend that claim 50 is allowable over the references given the reasons stated above for claim 49, respectively.

Applicants have made a diligent effort to place the claims in condition for allowance. However, should there remain unresolved issues that require adverse action, it is respectfully requested that the Examiner telephone Merle Richman, Applicants' Attorney at 858 320-2030 so that such issues may be resolved as expeditiously as possible.

For these reasons, and in view of the above amendments, this application is now considered to be in condition for allowance and such action is earnestly solicited.

Respectfully Submitted,



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